



US008925677B2

(12) **United States Patent**
Dugan et al.

(10) **Patent No.:** **US 8,925,677 B2**
(45) **Date of Patent:** **Jan. 6, 2015**

(54) **GYPSUM-PANEL ACOUSTICAL
MONOLITHIC CEILING**

(71) Applicant: **USG Interiors, LLC**, Chicago, IL (US)

(72) Inventors: **Erin Dugan**, Grayslake, IL (US); **Mark Miklosz**, Western Springs, IL (US); **Rafael Bury**, Wheeling, IL (US); **Lee K. Yeung**, Vernon Hills, IL (US); **William A. Frank**, Lake Villa, IL (US); **Peder J. Gulbrandsen**, Aurora, IL (US)

(73) Assignee: **USG Interiors, LLC**, Chicago, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/135,821**

(22) Filed: **Dec. 20, 2013**

(65) **Prior Publication Data**

US 2014/0124291 A1 May 8, 2014

Related U.S. Application Data

(63) Continuation-in-part of application No. 13/832,107, filed on Mar. 15, 2013, now Pat. No. 8,684,134, and a continuation-in-part of application No. 13/534,454, filed on Jun. 27, 2012, now Pat. No. 8,770,345.

(51) **Int. Cl.**

E04B 1/82 (2006.01)

E04B 2/02 (2006.01)

E04B 1/84 (2006.01)

E04C 2/04 (2006.01)

(52) **U.S. Cl.**

CPC **E04B 1/8409** (2013.01); **E04B 1/84** (2013.01); **E04B 2001/8495** (2013.01); **E04B 2001/8476** (2013.01); **E04C 2/043** (2013.01)

USPC **181/290**; 181/291; 181/293

(58) **Field of Classification Search**

CPC **E04B 1/8409**

USPC 181/290, 291, 293; 52/144, 145

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,045,311 A 6/1936 Roos et al.

2,126,956 A 8/1938 Gilbert

(Continued)

FOREIGN PATENT DOCUMENTS

DE 3147174 A1 6/1983

EP 2591181 A 1/2012

(Continued)

OTHER PUBLICATIONS

Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration of PCT/US2014/027518, filed Mar. 14, 2014, International Search Report dated Jun. 26, 2014, Written Opinion of the International Searching Authority.

(Continued)

Primary Examiner — Jeremy Luks

(74) *Attorney, Agent, or Firm* — Pearne & Gordon LLP

(57)

ABSTRACT

An acoustical panel for forming a monolithic ceiling or wall, the panel extending across a rectangular area, and having a core made primarily of gypsum, the core being essentially coextensive with the panel area such that it has two opposed sides, each of an area substantially equal to the area of the panel, the core having a multitude of perforations extending generally between its sides, the perforations being distributed substantially uniformly across the full area of the core and being open at both sides of the core, the face side of the core being covered by a porous layer, the perforations being optionally restricted at a rear side of the core, the porous layer at the face side of the core being suitable for adherence of drywall joint compound and a water-based non-blocking paint.

10 Claims, 8 Drawing Sheets

